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To cabrilloportpermit@EPA
cc
bcc
Subject Comments on Proposed Clean Air Act Permit for Cabrillo Port

Attached are comments from the Environmental Defense Center, submitted on behalf of the California Coastal Protection Network. This comment letter, along with all supporting attachments was also submitted via overnight delivery (FedEx tracking indicates it was received by EPA this morning). Please contact me if there are any problems with our submission. Thank you.

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EDC FINAL CAA Permit Comment Letter (8-2-06).pdf

August 2, 2006

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VIA OVERNIGHT DELIVERY

RE: Proposed Clean Air Act Permit for BHP Billiton's Cabrillo Port Liquefied Natural Gas Deepwater Port

Mr. Lapka:

The following comments on the U.S. Environmental Protection Agency ("EPA") proposed Clean Air Act Permit for the Cabrillo Port Liquefied Natural Gas Deepwater Port ("Cabrillo Port") are submitted by the Environmental Defense Center ("EDC") on behalf of our client, the California Coastal Protection Network ("CCPN"). CCPN is a California public benefit corporation, dedicated to the protection of the California coast through education, research, and empowerment of public citizens. CCPN is headquartered in Santa Barbara, California and represents members throughout the State, including Santa Barbara, Ventura, and Los Angeles Counties. EDC is a non-profit public interest law firm that represents community organizations in environmental matters affecting California's southern coast.

EPA has released a proposed Clean Air Act Permit that would authorize BHP Billiton ("BHPB" or "Applicant") to construct Cabrillo Port, a liquefied natural gas processing facility, approximately 14 miles offshore of Ventura County. This proposed permit is fundamentally flawed because it fails to incorporate the requirements that would apply to any other similar new source of emissions in Ventura County. EPA's proposal is just the latest in a progression of federal and state agency decisions that disregard applicable air quality requirements, downplay Cabrillo Port's significant air quality impacts, and allow Cabrillo Port air emissions to go unregulated and unmitigated. As the preeminent caretaker of our Nation's air quality and one of the primary decision makers regarding Cabrillo Port air quality requirements, it is now up to EPA to end the evasions and permit Cabrillo Port as required by law. EPA's proposed permit fails in this regard and its terms will allow Cabrillo Port emissions to interfere with Ventura County's and Los Angeles County's ability to achieve and maintain state and federal ozone air quality standards.

As discussed in detail below, EPA cannot finalize this permit as proposed because it violates the Deepwater Port Act, the Clean Air Act, and applicable State law. These laws require that Cabrillo Port be permitted in accordance with Ventura County Air Pollution Control District Rule 26.2, including the requirement to implement current best available control technology and the requirement to obtain offsetting emission reductions. Compliance with this rule will help ensure that both Ventura County and Los Angeles County can achieve state and federal ozone air quality standards.

Cabrillo Port must also be permitted in accordance with Ventura County Air Pollution Control District Rule 26.10 for any pollutants for which Ventura County is in "attainment" of federal air quality standards. However, compliance with Rule 26.10 is in addition to compliance with Rule 26.2, and it does not supplant Cabrillo Port's obligation to operate in accordance with Rule 26.2. In addition, to properly implement both Rule 26.2 and Rule 26.10, EPA must calculate an accurate "potential to emit" for Cabrillo Port. This will require EPA to correct multiple, significant errors in BHPB's emission estimates and to independently verify that BHPB's assumptions reflect actual operating parameters. The Cabrillo Port "potential to emit" must also include marine vessel emissions.

If EPA is going to proceed with permitting Cabrillo Port, it must issue a newly proposed permit that incorporates these modifications and circulate this proposal for an additional round of public review and comment. To prevent the steady stream of application updates that accompanied this public comment period, EPA must also ensure that the newly proposed permit is not issued while the permit application, including any emission estimates, remains in flux. The ongoing release of significant new information throughout this comment period has interfered with the public's ability to review and evaluate this permit proposal.

I. Legal Framework

The air quality requirements applicable to the Cabrillo Port derive from the Deepwater Port Act and the Clean Air Act.

The Deepwater Port Act ("DPA") regulates the ownership, construction and operation of deepwater ports located beyond State seaward boundaries. 33 U.S.C. §§ 1502(9) and 1503(a). Because the geographic location of such facilities may raise questions regarding the applicability of state and federal law, the DPA expressly clarifies that "[t]he Constitution, laws, and treaties of the United States shall apply to a deepwater port," including the activities connected or associated with the use or operation of the port, "in the same manner as if such port were an area of exclusive Federal jurisdiction located within a State." 33 U.S.C. § 1518(a). In addition:

> [t]he law of the nearest adjacent coastal State . . . is declared to be the law of the United States, and shall apply to any deepwater port licensed pursuant to [the DPA], to the extent applicable and not inconsistent with

> any provision or regulation under [the DPA] or other Federal laws and regulations.

33 U.S.C. § 1518(b). The DPA thus explicitly requires compliance with the laws of the state nearest the deepwater port.

The DPA also states that a deepwater port "shall be considered a 'new source' for purposes of the Clean Air Act." 33 U.S.C. § 1502(9)(D). In addition, a deepwater port may not be licensed if the EPA determines that it "will not conform with all applicable provisions of the Clean Air Act." 33 U.S.C. § 1503(c)(6).

Applicable Clean Air Act ("CAA") requirements for new sources of air pollution include that such sources must apply for and obtain a permit to construct the source before construction commences. 42 U.S.C. §§ 7475 and 7502(c)(5). Under the CAA, a new source that has the potential to emit above a threshold amount[1] of a pollutant for which an area is in "nonattainment" of federal air quality standards must comply with stringent preconstruction permit requirements in order to ensure that its emissions do not cause further degradation of the air quality or interfere with the area's ability to attain federal air quality standards. These requirements include that the source must obtain offsetting emission reductions such that the increase in emissions from the new source is offset by an equal or greater reduction in emissions in that area. 42 U.S.C. § 7503(a)(1). Sources must also demonstrate that their emission controls will comply with the "lowest achievable emission rate" ("LAER").[2] 42 U.S.C. § 7503(a)(2). A source that would emit above a threshold amount[3] of a pollutant for which an area is in "attainment" must, among other things, apply "best available control technology" ("BACT")[4] and conduct an air quality analysis to demonstrate that emissions will not cause or contribute to a violation of any applicable federal air quality standard. 42 U.S.C. § 7475(a). These requirements are intended to prevent any backsliding in air quality and are referred to as "prevention of significant deterioration," or "PSD" requirements.

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[1] Under the CAA, the threshold amount triggering compliance with nonattainment new source requirements is 100 tons per year. 42 U.S.C. § 7602(j).

[2] "LAER" means, "that rate of emissions which reflects – (A) the most stringent emission limitation which is contained in the implementation plan of any State for such class or category of source, unless the owner or operator of the proposed source demonstrates that such limitations are not achievable, or (B) the most stringent emission limitation which is achieved in practice by such class or category of source, whichever is more stringent." 42 U.S.C. § 7501(3).

[3] Under the CAA, the threshold amount triggering compliance with PSD requirements is 100 tons per year for certain categories of sources and 250 tons per year for any other source. 42 U.S.C. § 7479.

[4] "BACT" means "an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under this chapter emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility . . . ." 42 U.S.C. § 7479(3).

The CAA vests states with the responsibility to achieve and maintain federal air quality standards, and states must have an EPA approved state implementation plan ("SIP") which identifies emissions limitations, control measures and other standards that will ensure the state will achieve and maintain air quality standards. 42 U.S.C. §§ 7407 and 7410. The CAA explicitly authorizes states to adopt more stringent requirements than those identified in the CAA. 42 U.S.C. § 7416. State requirements incorporated into a SIP and approved by EPA are federally enforceable. 42 U.S.C. § 7413.

California's SIP consists of air quality management plans and regulations for multiple air districts throughout California, including the Ventura County Air Pollution Control District ("VC APCD"). VC APCD Rule 26 identifies the requirements for new sources of air pollution in Ventura County. VC APCD Rule 26 has been approved by EPA as part of the California SIP. Rios 2004c at 6. The EPA has also determined, pursuant to the DPA, that VC APCD rules are applicable to Cabrillo Port. EPA's Statement of Basis ("SOB") at 11-12.

Under VC APCD Rule 26, "any new, replacement, modified or relocated emissions unit which would have the potential to emit" ROC, NOx, PM10 or SOx must obtain offsets and must comply with the current BACT.[5] VC APCD Rule 26.2. Sources emitting 5 tons per year or more of NOx or ROC, or 15 tons per year or more of PM10 or SOx, must obtain offsets for those emissions. VC APCD Rule 26.2.B. Sources emitting pollutants for which Ventura County has attained federal air quality standards are also required to comply with the previously described federal PSD requirements. VC APCD Rule 26.10. These requirements are in place to ensure that Ventura County can achieve and maintain state and federal air quality standards. They also ensure that Ventura County does not cause or contribute to any violations of state or federal air quality standards in the South Coast Air Quality Management District. Cal. Health & Safety Code § 40912.

II. Cabrillo Port Must Be Permitted In Compliance With Ventura County APCD Rule 26.2

For this proposed permit, EPA has concluded that Cabrillo Port should be permitted as if it were a new source located in the federally designated "unclassifiable/attainment"[6] area of Anacapa Island and San Nicolas Island and exempts

[5] As discussed below, VC APCD's definition of BACT is equivalent to the CAA's standard of LAER.

[6] EPA incorrectly identifies this area as an ozone "attainment" area, suggesting that it has been determined to meet federal air quality standards. SOB at 17. This area has actually been designated "unclassifiable/attainment" for ozone. An area designation is "unclassifiable" if it cannot be shown that it meets, or does not meet, federal air quality standards on the basis of available information. Id. It is unclear why this area is designated unclassifiable when data collected from Anacapa Island over the course of

Cabrillo Port from VC APCD Rule 26.2 – the VC APCD requirements that apply to new sources throughout Ventura County. EPA's conclusion utterly disregards applicable state law and is neither legally nor factually supportable.

The DPA ensures the protection of the coastal environment in the vicinity of a deepwater port and also preserves the right of states near a deepwater port to protect their environment:

> It is declared to be the purposes of the Congress in this Act to . . . provide for the protection of the marine and coastal environment to prevent or minimize any adverse impact which might occur as a consequence of the development of such ports . . . [and to] protect the rights and responsibilities of States and communities to regulate growth, determine land use, and otherwise protect the environment in accordance with law.

33 U.S.C. § 1501(a)(2) and (4).

To further these purposes, the DPA requires compliance with the laws of the "nearest adjacent coastal state." 33 U.S.C. § 1518. The "nearest adjacent coastal state" is defined as the state "which (A) would be directly connected by pipeline to a deepwater port, as proposed in an application; (B) would be located within 15 miles of any such proposed deepwater port; or (C) is designated by the Secretary in accordance with section 9(a)(2) . . ." 33 U.S.C. § 1502(1). Section 1518(b) of the DPA emphasizes that geographic boundaries traditionally governing state jurisdiction do not apply and that the "nearest adjacent coastal state" is "that State whose seaward boundaries, if extended beyond 3 miles, would encompass the site of the deepwater port." 33 U.S.C. § 1518(b). In enacting this requirement, Congress was clear that Section 1518(b):

> . . . prevents the Deepwater Port Act from relieving, exempting or immunizing any person from requirements imposed by State or local law or regulation. In addition, States are not precluded from imposing more stringent environmental or safety regulations.

S. Rep. 93-1217, 93rd Cong., 2nd Sess. (Oct. 2, 1974), Sec. VI (discussing Sec. 19 of Senate Bill).

EPA has identified California as the "nearest adjacent coastal state," and it has specifically identified the air quality rules implemented by the VC APCD as the air quality requirements that are applicable to Cabrillo Port. SOB at 11-12. Under VC APCD rules, *any* new emissions source which has the potential to emit ROC, NOx, PM10, or SOx is required to comply with current BACT for such pollutants and to obtain offsets, unless the source falls within certain enumerated exemptions. VC APCD Rule 26.2 and 26.3. Cabrillo Port would emit NOx, ROC, PM10 and SO2. SOB at 9-10. Thus, under the

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several years, but before air monitors were removed in 1992, reported multiple federal air quality violations. Sears 2006 at 8-11.

plain terms of VC APCD Rule 26.2, Cabrillo Port is required to comply with BACT and obtain offsets in order to obtain a preconstruction permit.

EPA asserts that Cabrillo Port would be exempt from VC APCD Rule 26.2 requirements pursuant to Rule 26.3 which exempts "any emissions unit located on San Nicolas Island or Anacapa Island." SOB at 18. However, the plain language of Rule 26.3 demonstrates that Cabrillo Port is not covered by this exemption. Rule 26.3 only exempts sources located "*on* San Nicolas Island or Anacapa Island. VC APCD Rule 26.3.A.2 (emphasis added). Cabrillo Port would not be located "on" either Island. Its geographic location would be over 45 miles and 21 miles, respectively, from each Island. CSLC 2006 at Fig. 2.1-2.

Moreover, the VC APCD's approval of this Rule 26.3 exemption was premised on the District's intention that the only source of emissions subject to the exemption would be those operated by the U.S. Navy, and its expectation that any new emissions units or increases in emissions would be minor. VC APCD 1997 at 31-32. The VC APCD's Final Environmental Impact Report, which evaluated the potential environmental impacts of the Rule 26.3 exemption and other modifications to Rule 26, states:

> It is possible in the future that the Navy might need to add or make modifications to its existing equipment. Therefore the proposed rule revision could allow additional emissions. However, any modifications to existing equipment are expected to be minimal increases in emissions, because most of the equipment is used to provide electricity for the limited number of personnel on San Nicolas Island. Given the location of the islands and their limited infrastructure, it is unlikely that any new source would locate on the islands while under Navy ownership. It is anticipated that any associated emission increase would be small and that it would not have a project specific impact or cumulatively significant impact on air quality.

Id. As discussed in more detail below, emissions from Cabrillo Port are not minor, and they will have a significant impact on air quality. Thus, neither the plain language nor the intent of VC APCD Rule 26.3.A.2 supports exempting Cabrillo Port from VC APCD Rule 26.2 requirements for new sources.

EPA also attempts to insert some false ambiguity into the matter by highlighting EPA's different area designations for federal ozone air quality standards in Ventura County. EPA has designated "mainland" Ventura County (including areas within 3 miles of the mainland shoreline) as "nonattainment" for federal ozone air quality standards. 40 C.F.R. § 81.305. Anacapa Island and San Nicolas Island (including a three mile area around each Island), which are also within Ventura County, are designated as

"unclassifiable/attainment" for federal ozone air quality standards.[7] Id. Noting these distinct area designations for federal ozone standards, EPA asserts that the DPA "does not . . . specify how requirements that differ from place to place within the relevant state should be applied," and it therefore asserts that it has discretion to choose between imposing the requirements that apply to new sources of ozone pollution in the mainland area Ventura County and the requirements that apply to new sources of ozone pollution in the Anacapa Island and San Nicolas Island area. SOB at 17.

These assertions are incorrect and violate the DPA's federalization of the laws of the adjacent coastal state – in this case, the VC APCD rules for new sources. As discussed above, Rule 26.2 requirements are triggered based solely on whether a new source would emit ROC, NOx, PM, or SOx. VC APCD Rule 26.2. Rule 26.2 does not distinguish between sources located in an attainment area and sources located in a nonattainment area. This is demonstrated by the fact that although all of Ventura County (including the mainland) has been designated "unclassifiable/attainment" for PM and SO_2 federal air quality standards, Rule 26.2 nonetheless requires any source emitting PM or SO_2 to comply with its requirements. Id. The fact that mainland Ventura County is considered to be in "attainment" of federal air quality standards for PM and SO_2 does not exempt new sources that would emit these pollutants from Rule 26.2. Rather, in addition to complying with Rule 26.2, such sources would also have to comply with VC APCD Rule 26.10. This rule requires "any new major source . . . which would emit a pollutant in an area which is in attainment with the *federal* ambient air quality standards for such pollutant" to obtain a federal PSD permit from EPA. VC APCD Rule 26.10 (emphasis added). Thus, the only relevance of the federal area designations is to determine whether a new source would require two permits – one from VC APCD incorporating the requirements of Rule 26.2 and one from EPA incorporating federal PSD requirements. As specified in Rule 26.10:

> Any source that is subject to this rule is required to obtain separate permits from both the District and the U.S. Environmental Protection Agency.

VC APCD Rule 26.10.

The proper approach to permitting Cabrillo Port, therefore, is to issue a permit that complies with Rule 26.2 for emissions of ROC, NOx, PM10 and SOx *and* that also complies with Rule 26.10 for any pollutants for which Ventura County is in attainment of federal air quality standards. EPA's approach utterly disregards this plain application of the VC APCD rules to a new source of emissions in Ventura County.

In addition, even assuming the federal area designation for ozone would supplant the application of VC APCD Rule 26.2 to a new source, EPA is also incorrect when it

[7] In contrast, California has designated all of Ventura County, including the Islands, as an ozone nonattainment area. 17 C.C.R. §§ 60201 and 60205. EPA has failed to explain why it is appropriate to disregard these state area designations under the DPA.

states that the DPA does not specify how requirements that differ from place to place within the relevant state should be applied. To the extent EPA has any discretion to choose which federally designated area's requirements should apply to Cabrillo Port, choosing to permit Cabrillo Port as if it were located in an "unclassifiable/attainment" area is wholly unsupportable and fails to implement the DPA's mandate to apply the laws of the adjacent coastal state and its policy of protecting a state's coastal environment.

a. The Deepwater Port Act Requires Compliance With The Laws Of The Nearest Adjacent Area, Which Is The Mainland Ventura County Nonattainment Area

EPA's argument overlooks the fact that the DPA specifies that the law of the "*nearest* adjacent coastal state" applies to the deepwater port. 33 U.S.C. § 1518(b) (emphasis added). The use of the term "nearest" unmistakably dictates that if requirements, or area designations, differ from place to place within an "adjacent" state, EPA must consider the relative proximity of the new source to the respective geographic areas within the state.

Cabrillo Port would be located 13.8 miles from the nearest mainland landfall in Ventura County, 21.4 miles from Anacapa Island, and over 45 miles from San Nicolas Island. CSLC 2006 at Fig. 2.1-2.[8] Without question, Cabrillo Port would be closer to the mainland than it would be to either one of the Islands. Neither Anacapa Island nor San Nicolas Island qualifies as "nearest" to Cabrillo Port when compared to the mainland area of Ventura County. The mainland ozone nonattainment area is thus the "nearest" adjacent area within the state of California.

In addition, the DPA defines "nearest adjacent coastal state" to include the state "which (A) would be directly connected by pipeline to a deepwater port, as proposed in an application; (B) would be located within 15 miles of any such proposed deepwater port; or (C) is designated by the Secretary in accordance with section 9(a)(2) . . ." 33 U.S.C. § 1502(1). Cabrillo Port would be directly connected by pipeline to the mainland. SOB at 12. Cabrillo Port would be located within 15 miles of the mainland, but 21.4 miles and over 45 miles, respectively, from Anacapa Island and San Nicolas Island. While the mainland area meets this definition of "nearest adjacent coastal state," neither Island – both of which are located well beyond 15 miles of Cabrillo Port – meets this definition.

Thus, the Ventura County mainland ozone nonattainment area is the "nearest" adjacent area within the state of California, and Cabrillo Port must be permitted in accordance with the rules applicable in that area.[9]

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[8] EPA incorrectly states that Cabrillo Port would be located "18 *miles* from Anacapa Island." SOB at 4 (emphasis added). Although Cabrillo Port would be approximately 18 *nautical miles* from Anacapa Island, the distance in *miles* is 21.4.

[9] This is also consistent with permit requirements for outer continental shelf ("OCS") sources. In recognition of the significant impact that offshore sources can have on coastal air quality, OCS sources located within 25 miles of California's seaward boundary are

b. Cabrillo Port Must Be Permitted In A Manner That Protects Coastal Air Quality

Congress intended that the DPA would protect the marine and coastal environment in the vicinity of a deepwater port and preserve the rights of the states to protect their environment. 33 U.S.C. § 1501(a)(2) and (4).[10] To the extent the DPA vests EPA with the discretion to choose among different federal area designations or requirements (which it does not), EPA must demonstrate that its choice is protective of the coastal environment and preserves the right of the California to protect its environment. EPA has failed to make any such demonstration.

EPA asserts that it "considered factors such as the location of the [Floating Storage and Regasification Unit ("FSRU")] in relation to the Channel Islands, the current uses of the Channel Islands, and the amount of emissions and the air quality impact expected from the stationary source," in its determination that Cabrillo Port should not have to comply with VC APCD Rule 26.2. SOB at 17. This bare assertion fails to demonstrate that any of these factors support EPA's choice. More importantly, consideration of each of these factors demonstrates just the opposite – that Cabrillo Port must be permitted in accordance with VC APCD Rule 26.2 in order to protect mainland air quality and preserve the local air districts' ability to attain state and federal air quality standards.

i. <u>Cabrillo Port Will Have A Significant Impact On Coastal Mainland Air Quality</u>

The absurdity of EPA's permit approach is highlighted by the undisputed fact that the emissions generated by Cabrillo Port will be received in the mainland nonattainment area and will significantly increase the ozone burden in the South Central Coast (including Ventura County) and South Coast (including Los Angeles County) air basins. Ms. Camille Sears, an air quality expert, has reviewed the Cabrillo Port Project and concluded that EPA's proposed permitting approach ignores the impacts from offshore

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regulated in accordance with the "corresponding onshore area" designation for each pollutant emitted. 42 U.S.C. § 7627(a)(1); S. Rep. 101-228, 101st Cong., 1st Sess. 28 (1990). The "corresponding onshore area" is the onshore area that is "closest to the source." 43 U.S.C. § 7627(a)(4)(B). Since these requirements were enacted, VC APCD has required offshore OCS sources to utilize BACT and obtain offsets in accordance with VC APCD Rule 26.2. Zozula 2006.

[10] To ensure this outcome, Congress even went so far as to authorize the Secretary to designate a state as an "adjacent coastal state" even if it does not meet the DPA definitions, if it is determined that "there is a risk of damage to the coastal environment of such state equal to or greater than the risk posed to a state directly connected by pipeline to the proposed deepwater port." 33 U.S.C. § 1508(a)(2).

project emissions on the mainland ozone nonattainment areas. Sears 2006[11]; see also, Lewis 2006 at 9-10.[12] Ms. Sears identifies and describes multiple published peer reviewed studies and meteorological analyses, all of which demonstrate that "offshore emissions in the Project area are part of the onshore ozone nonattainment problem." Sears 2006 at 4, 4-7. Ms. Sears' own analysis, based on existing wind flow data, corroborates these studies, and demonstrates that Cabrillo Port emissions will blow onshore into Santa Barbara County, Ventura County, and Los Angeles County "roughly 80 percent of the time." Id. at 7.

More generally, as Ms. Sears notes, the California Air Resources Board ("CARB") has concluded, based on extensive data (including island, shipboard, and coastal meteorological observations), that emissions occurring a large distance (ranging coast-wide from 24 nautical miles to 90 nautical miles, or 27 to 102 miles) from the California coast "are likely to be transported ashore and affect the air quality in California's coastal air basins, particularly during the summer." Id. at 8; see also, Scheible 2006 at Appendix B/Attachment, fn 1. CARB refers to this area as "California Coastal Waters." CARB 1984 at 78-80. Recently, CARB has proposed a rule requiring marine vessels operating within a subset of California Coastal Waters (within 24 nautical miles of the California Coastline) to reduce the onshore impacts of marine vessel diesel emissions. CARB 2005. In support of this proposal, CARB states that:

> The transport of air pollution over long distances and between air basins has been well established. The emissions from ocean-going vessels can travel great distances and numerous studies have shown local, regional, and global impacts on air quality . . . . Several studies support ARB staffs [sic] conclusion that emissions from ocean-going vessels released offshore the California Coast can impact onshore air quality.

Id. at IV-7.

CARB has also specifically concluded that Cabrillo Port operation, particularly the operation of its associated marine vessels, will impact mainland nonattainment areas.[13] Scheible 2006. In addition, the VC APCD, the South Coast Air Quality Management District ("SC AQMD"), and the Santa Barbara County Air Pollution

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[11] Ms. Sears has reviewed EPA's proposed CAA permit for Cabrillo Port and separately submitted her comments to EPA. Sears 2006. These comments are referenced throughout this letter, and Ms. Sears' July 26, 2006 comment letter in its entirety is incorporated by reference into EDC's comments.

[12] Ms. Lewis has reviewed EPA's proposed CAA permit for Cabrillo Port on behalf of EDC and CCPN. Her analysis is detailed in a July 31, 2006 report to EDC. Lewis 2006. This report in its entirety is incorporated by reference into EDC's comments.

[13] Marine vessel emissions are identified here to demonstrate that offshore emissions, whether generated by marine vessels or other sources of emissions, will contribute to the mainland nonattainment problem. The proper consideration of marine vessel emissions under the DPA and the CAA is discussed in more detail below.

Control District ("SBC APCD") have all acknowledged that Cabrillo Port emissions would impact mainland areas. Villegas 2006; Whynot 2005; Cantle 2006. The California State Lands Commission ("CSLC") Revised Draft Environmental Impact Report ("Revised DEIR") also concludes that emissions of NOx and ROC generated from operation of the FSRU equipment and project vessels would contribute to ambient ozone impacts in onshore areas downwind of the project location. CSLC 2006 at 4.6-33 – 4.6-35.

Congress also acknowledged the significant impact offshore sources can have on mainland air quality when it directed EPA to control sources of pollution located offshore on the outer continental shelf ("OCS"). See 42 U.S.C. § 7627. In enacting these requirements, Congress was motivated by "the fact that OCS air pollution is causing or contributing to the violation of Federal and State ambient air quality standards in coastal regions." S. Rep. 101-228, 101st Cong., 1st Sess. 28 (1990). Specifically, Congress noted that:

> The magnitude of OCS pollution and the fact that the prevailing winds bring much of this pollution onshore has led the Environmental Protection Agency to express concern about the onshore air quality impacts from OCS development, along the coasts of both California and the Gulf States.

Id. These OCS source requirements disprove EPA's disregard here for the onshore air quality impacts that would result from Cabrillo Port emissions. OCS sources within 25 miles of a state seaward boundary must comply with the same requirements that apply to sources located in the "corresponding onshore area," which is defined as the onshore area "closest" to the source. 42 U.S.C. § 7627(a)(1) and (a)(4)(B)." Such requirements include "emission controls, emission limitations, offsets, permitting, monitoring, testing, and reporting." 42 U.S.C. § 7627(a)(1). Sources located beyond 25 miles are also subject to certain requirements. 40 C.F.R. § 55.13. Since these requirements were enacted, VC APCD has required offshore OCS sources to utilize BACT and obtain offsets in accordance with VC APCD Rule 26.2. Zozula 2006.

Finally, even EPA has acknowledged that offshore emissions can have significant impacts on onshore ambient air quality. Rios 2004c, fn 12. Unfortunately, with respect to the Cabrillo Port proposed permit, EPA simply omits and ignores the substantial evidence that demonstrates the significant impact Cabrillo Port will have on the coastal mainland areas. This evidence demonstrates that there is no valid basis to dispute that Cabrillo Port ozone precursor emissions generated offshore will be transported to nearby ozone nonattainment areas, particularly in Ventura County and Los Angeles County.

BHPB's assertion that "there is insignificant potential for the proposed project to impact the onshore ozone attainment area" is unsupportable, and EPA cannot reasonably rely on this conclusion. Permit Application, App. J; SOB at 29. The Applicant's study of this issue is limited to a model that does not consider "photochemical reactions and other parameters necessary to assess ozone impacts." Sears 2006 at 7-8. BHPB provides no documentation to support its "unique method" of characterizing ozone impacts. Id.

Moreover, BHPB's analysis excludes the majority of Cabrillo Port emissions. Id. at 8. BHPB's conclusion is thus unsupportable and otherwise flatly contradicted by the multiple studies and meteorological assessments demonstrating that offshore emissions of ozone precursors do blow onshore and impact onshore air quality. Id. at 3-8. It is also inconsistent with the conclusions of each of the state and local agencies responsible for attaining and maintaining federal and state air quality standards in the vicinity of Cabrillo Port, including CARB, VC APCD, SC AQMD, and SBC APCD.

The potential impacts of additional ozone precursor emissions on the nonattainment status of Ventura County and Los Angeles County cannot be downplayed. Although both areas' ozone levels have improved since the early 1990s, they still have much to accomplish to achieve their air quality goals. See, e.g., SC AQMD 2003 at ES-4 (the South Coast Air Basin "still exceeds the federal 1-hour standard more frequently than any other location in the U.S."). The failure of these areas to achieve ozone air quality standards means continuing severe health effects for the general population, and particularly for "children and adults with preexisting lung disease such as asthma and chronic pulmonary lung disease." Id. Those who exercise outdoors are also highly susceptible to the adverse effects of ozone. Id. Continued nonattainment of ozone air quality standards also means continued serious impacts to agriculture:

> Ozone probably causes more injury to vegetation than any other air pollutant. According to the California Department of Food and Agriculture, ozone causes 80-90 percent of the air pollution related agricultural losses in California.

VC APCD 1994 at 1-6 – 1-7.

Thus, Cabrillo Port emissions will impact the health of the communities in Ventura County and Los Angeles County and will undermine both areas' ability to attain and maintain state and federal ozone air quality standards. These impacts to the coastal environment and to the right and responsibility of the State to protect that environment are precisely what Congress intended to avoid when it enacted the DPA. 33 U.S.C. § 1501(a)(2) and (4).

ii. None Of The Other Factors Cited By EPA Support A Determination That Cabrillo Port Should Not Comply With Mainland Nonattainment Area Requirements

EPA also cites to "the location of the FSRU in relation to the Channel Islands, the current uses of the Channel Islands, and the amount of emissions . . . from the stationary source." None of these factors support a determination that Cabrillo Port should not be permitted in accordance with mainland nonattainment area requirements.

First, as discussed above, Cabrillo Port would be located 13.8 miles from the nearest mainland landfall in Ventura County, but 21.4 miles from Anacapa Island and over 45 miles from San Nicolas Island. CSLC 2006 at Fig. 2.1-2. Cabrillo Port would thus be closer to the mainland than it would be to either one of the Islands. Furthermore,

the relative distance of Cabrillo Port to the mainland is not a determinative factor for whether Cabrillo Port will impact mainland air quality. As discussed above, emissions initially generated at significant distances from the coastline will transport to onshore areas and affect onshore air quality. Sears 2006 at 3-8. The location of the FSRU in relation to the Channel Islands, therefore, does not support allowing Cabrillo Port to operate without complying with mainland nonattainment area requirements.

Second, the current uses of the Channel Islands are not consistent with a source such as Cabrillo Port. As discussed above, the U.S. Navy is the primary source of emissions on Anacapa Island and San Nicolas Island, and additional, significant new sources were never anticipated for the area. VC APCD 1997 at 31-32. No significant new sources have been added on San Nicolas Island since VC APCD implemented its Rule 26.3 exemption. Id.; Thomas 2006. Similarly, the only equipment on Anacapa Island that is subject to a permit emits below 1 ton per year of pollutants. Thomas 2006a. In addition, Anacapa Island is a National Park, and locating a major new source of emissions such as Cabrillo Port would be incompatible with the current uses of the Park and its National Park status.

Finally, the amount of emissions generated by Cabrillo Port is significant. Even if consideration of Cabrillo Port emissions is limited to the FSRU emissions identified by EPA[14] (including 66.07 tons per year of NOx and 28.66 tons per year of ROC), these emissions easily clear the threshold for compliance with VC APCD rules for new sources. VC APCD Rule 26.2 requires new sources emitting *any* ROC or NOx to comply with BACT. Emissions of 5 tons per year or greater of ROC or NOx trigger the requirement to obtain offsets.

Moreover, Cabrillo Port emissions would be significant relative to existing sources of air pollution in Ventura County. The NOx emissions identified by EPA just for the FSRU (66.07 tons per year) are almost twice as much as those emitted by the top OCS source of NOx. Thomas 2006. Cabrillo Port would be one of the top five NOx emitting facilities in all of Ventura County. Id. Including the NOx emissions EPA identifies for the marine vessels associated with Cabrillo Port (163.34 tons per year) would make Cabrillo Port the highest source of NOx emissions in all of Ventura County. Id.

Thus, none of the factors cited by EPA support a determination that Cabrillo Port should not be required to comply with mainland nonattainment area requirements for new sources of air pollution.

[14] Both the FSRU and marine vessel emissions associated with Cabrillo Port are significantly underestimated by EPA and BHPB. See discussion below.

c. EPA's Current Position Is An Arbitrary Change From Its Prior Position That Cabrillo Port Must Comply With Rule 26 And Obtain Offsets

Significantly, the factors identified by EPA to justify this proposed permit have been previously cited by EPA as reasons why Cabrillo Port *should comply* with VC APCD Rule 26, including the requirement to obtain offsets. In fact, EPA's prior position – a position the Agency consistently held for almost two years – was that Cabrillo Port must be permitted in accordance with the very requirements that it now says do not apply.

On April 5, 2004, in response to BHPB's initial air permit application, EPA Region 9 informed BHPB that it would permit Cabrillo Port consistent with the VC APCD's Rule 26 requirements, including the requirement to obtain offsets.[15] Rios 2004a. EPA Region 9 requested that BHPB submit information regarding offsetting Cabrillo Port emissions consistent with VC APCD requirements by May 7, 2004. Id. Instead, in an all out effort to influence EPA's conclusion and evade the requirements to comply with BACT and obtain offsets, BHPB hired two law firms and several consultants to submit a number of letters to EPA and VC APCD arguing that such requirements should not be imposed on Cabrillo Port. Kirby 2004; Umenhoffer 2004; Wood 2005; Wood 2005a. BHPB also contacted the White House Task Force On Energy Project Streamlining in May of 2004. Meheen 2004. Just two weeks later, EPA Region 9 received an inquiry from the White House Task Force requiring an expedited explanation of EPA's permit approach, including the decision to require offsets. Middleton 2004. In response to all of this, and despite such extensive lobbying, EPA maintained its legal determination and provided BHPB, the White House and the Coast Guard with several legal and factual analyses supporting its decision to impose the requirements of VC APCD Rule 26, including the requirement to obtain offsets. Rios 2004a; Rios 2004c; McLeod 2004; Hanf 2004; Manzanilla 2004.

EPA had such conviction in this position that in June of 2004, the Agency requested that the Coast Guard should not restart the DPA clock in light of BHPB's failure to provide information regarding offsets. Rios 2004b.[16] In January 2005, the Coast Guard stopped the clock a second time, citing in part BHPB's failure to demonstrate its ability to obtain offsets. Lesnick and Prescott 2005. In February 2005, the Coast Guard

[15] As early as January 30, 2004, EPA informed BHP that it was evaluating the applicability of VC APCD's rules for new sources. Rios 2004.

[16] A decision on a deepwater port license must be made no later than 330 days after notice of the initial application has been published. 33 U.S.C. § 1504. However, the U.S. Coast Guard may suspend the licensing process to obtain additional information necessary to process an application. 33 C.F.R. § 148.107. The Coast Guard originally suspended the Cabrillo Port licensing process (i.e., "stopped the clock") on April 6, 2004 to obtain supplemental information concerning pipeline alignments. On June 10, 2004 and January 5 and February 10, 2005, the Coast Guard continued the suspension due to the need for additional information, including EPA's request for information about Cabrillo Port emissions and offsets under VC APCD Rule 26.

asked for more detailed information regarding project emissions and offsets. Prescott 2005.

These letters and actions illustrate EPA's carefully analyzed and consistently held position that Cabrillo Port must be permitted in accordance with VC APCD Rule 26.2. In contrast, EPA's change in position is devoid of legal analysis or explanation. Zimpfer 2005a. Given the glaring lack of support for EPA's change in position, it seems apparent that the likely explanation for EPA's departure from the law is that it ultimately succumbed to the significant pressure from BHPB's political allies in the White House and EPA Headquarters. Two days after EPA's June 29, 2005 letter (and in response to an email distributing that letter throughout EPA), EPA's then Assistant Administrator for the Office of Air and Radiation, Jeff Holmstead, wrote to Amy Zimpfer of EPA Region 9, "Thanks, Amy, to you personally and your team for making this happen. I believe this is a good result for everybody." Holmstead 2005. EPA Region 9 staff have also publicly acknowledged that the reason for EPA's reversal is that "major decisions on the LNG issue are coming from political appointees at EPA headquarters in Washington," after "lobbying from BHP Billiton." Laetz 2006.

It is thus apparent that EPA, in defiance of applicable legal requirements and the evidence demonstrating the significant impact Cabrillo Port will have on the air quality of mainland nonattainment areas, has simply made a political decision to allow Cabrillo Port to operate outside the law.

d. EPA's Proposed Permit Does Not Comply With VC APCD Rule 26.2

EPA has already determined that the VC APCD portion of the California SIP "contains the applicable air permitting regulations." SOB at 12. We agree that it is appropriate to permit Cabrillo Port in accordance with the VC APCD rules. For the reasons described above, EPA must specifically permit Cabrillo Port in accordance with VC APCD Rule 26.2. VC APCD Rule 26.2 requires that "any new, replacement, modified or relocated emissions unit which would have the potential to emit" ROC, NOx, PM10 or SOx must obtain offsets and must comply with the current BACT.[17] The proposed permit fails to incorporate these requirements.

i. <u>Rule 26.2 Requires That Cabrillo Port Must Be Equipped With Current BACT</u>

Pursuant to VC APCD Rule 26.2.A, an Authority to Construct permit for any new emissions source which would have a potential to emit ROC, NOx, PM10, or SOx must require current BACT for such pollutants. Although EPA claims BACT is not required, the Agency nonetheless highlights BHPB's "firm commitment" to control stationary source emissions using technologies that are consistent with BACT. SOB at 3, 29.

[17] VC APCD's definition of "BACT" for purposes of Rule 26 is equivalent to the CAA's standard of LAER. VC APCD Rule 26.1.3 and 42 U.S.C. § 7501(3); see also, Zimpfer 2005.

However, BHPB's commitments in this area are not consistent with BACT and do not constitute compliance with VC APCD Rule 26.2.A.

BHPB has not utilized BACT for the two principal air emission sources on the FRSU – the main internal combustion engine electric generators and the submerged combustion vaporizers (SCV). Powers 2006.[18] The NOx BACT committed to by BHPB for the main engines is 9 ppm using selective catalytic reduction (SCR) for NOx control, and it is 20 ppm for the SCVs using low NOx burners. Id. at 2-9. However, NOx BACT for both the main engines and the SCVs should be 5 ppm as this is the established BACT for each of these source types. Id. The 5 ppm NOx limit "has been demonstrated repeatedly" for large natural gas fired engines. Id. at 3. The use of SCR for SCV burners (controlling NOx emissions at 5 ppm) has been implemented by the Distrigas facility and it has been incorporated into two floating offshore LNG terminal projects currently proposed in the Northeast.[19] Id. at 4-9. The FSRU NOx emissions would be reduced to approximately 20 tons per year if the correct 5 ppm NOx BACT limit were applied to the Wartsila main engines and the SCVs. Id. at 1.

In addition, BHPB is not utilizing BACT for their marine vessels. The tugboats[20] and LNG carriers are not equipped with SCR, even though "SCR is a well-established NOx control technology for marine vessels, with 350 marine vessel SCRs in operation as of 2005." Id. at 9. In fact, Wartsila, the proposed supplier of the FSRU main engines and the Cabrillo Port tug engines, "is one of the leading suppliers of marine SCR installations in the world." Id. Significantly, the two LNG terminals proposed in the Northeast U.S. have both elected to equip their main propulsion boilers (which also serve as regasification boilers) with SCR. Id. at 10.

Even accepting BHPB's BACT commitments at face value, the proposed permit is still inadequate to ensure that BHPB's control technologies will actually limit emissions as claimed by BHPB. In particular, the permit does not contain adequate conditions to ensure the low NOx burner technology BHPB would utilize for the SCVs will result in a .0243 lb/MMBtu level of NOx emission control. Lewis at 3-4. Similarly,

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[18] Mr. Bill Powers has analyzed BHPB's BACT commitments to determine whether they comport with VC APCD Rule 26.2. His comments are detailed in a July 31, 2006 letter to EDC. Powers 2006. This letter in its entirety is incorporated herein by reference.

[19] BHPB's critique of SCR at the Distrigas facility is unavailing. Powers at 4-8. The specific design at Distrigas need not be mimicked at Cabrillo Port. Id. Modifications based on lessons learned at Distrigas design could and should be made. Id. Mr. Powers had identified specific design adjustments that could feasibly be incorporated into Cabrillo Port to implement SCR for the SCVs. Id. In addition, BHPB significantly overstates the cost estimate for SCR. Id. at 8-9.

[20] Although BHPB claims that it has already achieved significantly lower tug emissions by using state-of-the-art low NOx engines, there is no reason to believe such low emissions will be achieved in practice. Powers 2006 at 9-10. Ninety-eight percent of tug operation will occur at engine loads well below those at which the manufacturer guarantees the low NOx rates BHPB relies on. Id.

the permit does not contain adequate conditions to ensure that emissions from the FSRU main engines will perform in keeping with BHPB's estimates. Id. at 4-5.

Thus, BHPB's so-called "BACT commitments" are not BACT as required by VC APCD Rule 26.2, nor does the proposed permit contain adequate conditions to even ensure BHPB's control technologies will limit emissions in accordance with BHPB's commitments. EPA must issue a new proposed permit that complies with Rule 26.2.A, and conduct its own analysis of BACT compliance rather than deferring to BHPB's analysis. This information must be provided to the public for review and comment before EPA makes its final permit decision for Cabrillo Port. See, e.g., Ober v. U.S. EPA, 84 F.3d 304, 313-316 (9th Cir. 1996) (holding that post-comment period information that is critical to agency's decision must be made available for public review and comment before the agency makes its final decision).

ii. Rule 26.2 Requires That BHPB Obtain Offsets To Compensate For Cabrillo Port Emissions

VC APCD Rule 26.2 also requires that an Authority to Construct Permit cannot be issued for any new emissions unit with the potential to emit ROC or NOx (in an amount equal to or greater than 5 tons per year), or to emit PM10 or SOx (in an amount equal to or greater than 15 tons per year), unless "offsets are provided." VC APCD Rule 26.2.B. An "offset" is "an emission reduction credit or community bank emission reduction credit which is used to mitigate an emission increase from any new, replacement, modified, or relocated emissions unit." VC APCD Rule 26.1.19. The amount of offsets that must be provided is based on the amount of pollutants emitted by the new source. VC APCD Rule 26.2.B.2. Sources with the potential to emit 25 tons per year or more of NOx or ROC must obtain offsets at a tradeoff ratio of 1.3:1. Id. Offsets are calculated based on a source's "potential to emit."[21]

Although EPA claims compliance with VC APCD Rule 26.2 is not required, EPA has identified "air quality improvement projects" that the Applicant has apparently committed to carrying out. SOB at 29-30. These projects do not qualify as offsets under VC APCD Rule 26.[22]

VC APCD Rule 26.4 establishes offset eligibility standards to ensure offsets are "real, quantifiable, permanent, enforceable, and surplus." VC APCD Rule 26.4. Offsets that meet these requirements must be "banked" and certified for use. Id. None of the "projects" identified by BHPB have been banked and certified in compliance with the VC APCD rules. VC APCD 2005 (identifying available "ERC certificates"). In addition, the emissions reductions claimed for two of these "projects" (natural gas fueled vessels and

[21] The "potential to emit" identified by EPA for the Cabrillo Port significantly understates the actual "potential to emit" for this source. This issue is discussed in more detail below.
[22] The air quality improvement projects are also completely inadequate to otherwise mitigate Cabrillo Port's air quality impacts for the VC APCD and the SC AQMD. This issue is discussed in more detail below.

use of extremely low emitting engines in tugs) have already been incorporated into the emissions estimates for Cabrillo Port, and they cannot simultaneously be used to both reduce and offset the source's potential to emit. For the remaining "project," the retrofitting of two existing tugs, most of the reductions claimed by BHPB would occur outside Ventura County. Sears 2006 at 22-25. Even assuming these reductions had been certified as offsets, additional conditions and requirements must be met in order for a source to use offsets from another area. Cal. Health & Safety Code § 40709.6. Significantly, the NOx reductions BHPB claims would occur within the VC APCD – 21.31 tons per year – are not sufficient to meet the required offset ratio of 1.3:1, even if offsets are only required for the FSRU emissions (86 tons per year required to offset 66 tons per year). Sears 2006 at 24. Moreover, BHPB does not identify any ROC emissions reductions to offset even the 28.66 tons per year that would be emitted just from the FSRU.

As no offsets have been identified for Cabrillo Port, EPA must issue a new proposed permit that complies with Rule 26.2, including the identification of offsets so that this information is provided to the public for review and comment before EPA makes its final permit decision for Cabrillo Port. See, e.g., Ober v. U.S. EPA, *supra*, 84 F.3d 304, 313-316.

In sum, the proposed permit is fundamentally flawed and cannot be finalized as proposed because it violates the Deepwater Port Act, the Clean Air Act, and applicable State law. These laws require that Cabrillo Port be permitted in accordance with Ventura County Air Pollution Control District Rule 26.2, including the requirement to implement current BACT and the requirement to obtain offsetting emission reductions.

III. EPA and BHPB Significantly Understate Cabrillo Port's "Potential To Emit"

EPA and BHPB have failed to identify an accurate "potential to emit" ("PTE") for Cabrillo Port. A PTE is:

> [A]n emission limit which specifies the maximum quantity of each air pollutant which may be emitted by an emissions unit during a 12 calendar month rolling period . . . . The potential to emit shall be calculated based on the maximum design capacity or other operating conditions which reflect the maximum potential emissions, unless specific limiting conditions on the Authority to Construct and/or Permit to Operate restrict emissions to a lower level.

VC APCD Rule 26.1.22; see also, 40 C.F.R. §51.165(a)(iii).

Calculating and identifying an accurate PTE for Cabrillo Port is critical for several reasons. Under VC APCD Rule 26.2.B, the amount of offsets required is calculated based on a source's PTE. In addition, the PTE must be accurately identified to determine whether Cabrillo Port qualifies as a "major stationary source" for purposes of applying VC APCD Rule 26.10. 40 C.F.R. § 52.21(b)(1). Moreover, if a source is

electing to limit its PTE based on conditions in its permit, both the PTE and the limiting permit conditions must be identified in order to ensure such conditions practically limit the source's PTE and that they are enforceable.

The identified PTE is inaccurate because it relies on emissions estimates that are underestimated and because it fails to include marine vessel emissions.

a. FSRU Emissions Are Underestimated

The estimates for FSRU emissions rely on incorrect assumptions, and as a result, these emissions estimates are likely underestimated.

For example, the main generator engine emissions are calculated using the wrong emission factor. Sears 2006 at 11-13. NOx emissions were calculated using an emission factor that is only valid for engines running at a 90% load, but the engines at the FSRU will only operate at an average load factor of 51.2 %. Id. Thus, EPA is missing information necessary to accurately estimate the correct emissions from the Wartsila engine operating at 51.2 % load as part of the FSRU operations. Id. Moreover, "since NOx concentration usually increases as the load level decreases, the Cabrillo Port NOx emissions are likely to be underestimated" as a result of this error. Id. at 12. EPA and the Applicant must utilize emissions factors and other specifications that reflect the actual operating parameters for Cabrillo Port. Id. at 11-13; see also Lewis at 4-5.

In addition, EPA and the Applicant have apparently failed to take into account the fact that the natural gas used to operate the FSRU may have a higher heating value, and thus potentially higher NOx emissions. The FSRU equipment will be fueled with "boil off gas" generated from the LNG imported by the Applicant and then stored in the FSRU storage tanks. SOB at 2; Proposed Permit. The permit materials fail to disclose the source or heating value of this natural gas, but the Applicant has elsewhere stated its intent to import natural gas from the Scarborough Field in Australia. See, e.g., Wood 2005b at 1.

Scarborough natural gas has a relatively low heating value, consistent with the natural gas that is typically burned in Southern California. Id.; Wallerstein 2005a. The Applicant, however, has not committed to importing gas from Scarborough Field or any other specific source. Wood 2005b at 2; CSLC 2006 at 4.6-24. The Revised DEIR for Cabrillo Port acknowledges that the "precise heat content" of the natural gas to be imported is unknown, and that the Applicant may import gas from Indonesia if it cannot get "high quality" gas from the Scarborough Field in Australia. CSLC at 2-14 and 4.6-24. Malaysia and Indonesia have also been identified as potential natural gas sources for Cabrillo Port. EPA 2006. Exxon, which holds controlling ownership of Scarborough Field, has not committed this source to Cabrillo Port. Nelson 2006; Macdonald-Smith 2006. Thus, the natural gas imported by Cabrillo Port and used to fuel the FSRU engines may not, in fact, have a lower heating value.

Combustion of natural gas with higher heating values can result in increased combustion temperature and increased NOx emissions. CSLC 2006 at 4.6-24. According

to testing conducted by the SC AQMD, "the combustion of natural gas with uncharacteristically higher heating values could increase stationary source NOx emissions by greater than 20%. . ." CSLC 2006 at 4.6-24. FSRU engines utilizing gas with a higher heating value, therefore, could have increased NOx emissions. Sears 2006 at 19-20.

The SC AQMD and the Santa Barbara Air Pollution Control District and Southern California Gas Company have all raised concerns regarding variable gas quality from Cabrillo Port and its polluting impacts.[23] Murphy 2005; Wallerstein 2005a; Wallerstein 2005; see also Lewis 2006 at 11. Notably, BHPB has refused to install equipment that would strip out LNG components to reduce its heat value and provide cleaner gas irrespective of the source, as another LNG project applicant, Sound Energy Solutions, is doing as part of its project in Long Beach. Nazemi 2005; Wood 2005c. EPA must therefore revise the Cabrillo Port "potential to emit" to reflect the higher NOx emissions that could result from natural gas with higher heating values.

Finally, there are some significant discrepancies in the proposed permit conditions that would result in higher emissions than estimated. Although the SCV emissions estimates are based on a unit size of 115 MMBtu/hr, the proposed permit specifies a unit size of 155MMBtu/hr. Lewis 2006 at 3. The larger unit identified in the permit would produce approximately 34% higher emissions of all pollutants. Id. In addition, the proposed permit identifies an SCV per unit emission limit that would allow four times the emissions identified for the SCVs. Id. EPA must either recalculate SCV emissions to account for the full scope of SCV emissions that would be authorized by the permit, or correct the discrepancies in the permit conditions.

b. Marine Vessel Emissions Are Underestimated

EPA and BHPB also underestimate marine vessel emissions.

First, incorrect and inapplicable emission factors have been used to calculate the vessel emissions.[24] Sears 2006 at 13-15. The emission factors used to calculate LNG carrier emissions were developed from engine types and fuel content that are markedly different from the LNG carriers. Id. These emission factors "apply to relatively small gas compressor engines, not extremely large tanker propulsion units." Id. at 14. The average size of these engines is "only about 2.7 percent of the Cabrillo Port LNG Carrier horsepower rating (60,000 hp)." Id. at 15. Moreover, the emission factors were

[23] In particular, these agencies have raised concerns about the increased NOx emissions that could result from residential and industrial end users of Cabrillo Port natural gas.
[24] EPA's LNG carrier emissions estimates are also less than the estimates for the CSLC's Revised DEIR. Sears 2006 at 13. This appears to be the result of BHPB's modification of the fuel energy conversion efficiency and a unitless correction factor. Id. Insufficient information has been provided for the public to independently verify BHPB's assumptions in this regard, so EPA must conduct this verification and demonstrate that BHPB's modifications are appropriate and that the reduction calculated is accurate.

developed based on engines using only natural gas, not the fuel mix of 99% natural gas and 1% diesel fuel proposed for this project. Id. The estimates of LNG carrier emissions are, thus, utterly unreliable. Id. EPA must utilize emission rates "obtained from source-tests or vendor specifications for the engines being proposed" in order to develop reliable, accurate estimates of LNG carrier and project tug emissions. Id.; see also Lewis at 6 (discussing BHPB's "cherry picking" of lower NOx emission factors).

A similar problem exists with the estimates of NOx emissions from the tugs. The emission estimates for the tug Wartsila 32DF engines are based on Wartsila's NOx emission factor of 1.3 g/kw-hr. Sears 2006 at 18. This emission factor is only valid for load factors of 90% and 100% (which is essentially operating the tug at full throttle). Id. at 19. Cabrillo Port tugs, however, will run on an average-weighted load rate of only 11%. Id. Wartsila 32DF manufacturer specifications indicate that these engines emit different concentrations of NOx as a function of engine load:

> At 75 percent load, the NOx emission factor is 1.6 g/kw-hr, and at 50 percent load, the factor increases to 2.7 g/kw-hr. It is highly likely that this NOx emissions trend will continue, such that lower loads result in even higher g/kw-hr emission factors.

Id. at 18. It is thus likely that "even the 2.7 g/kw-hr emission factor for 50 percent load is an underestimate" of the tug NOx emissions. Id. at 19. See, also, Powers 2006 at 9-10 (Explaining that 98 percent of tug operation will occur at engine loads well below those at which the manufacturer guarantees the low NOx rates BHPB relies on).

In addition, as explained in detail above, EPA and the Applicant have failed to take into account the fact that the natural gas imported by Cabrillo Port may have a higher heating value, and thus result in potentially higher NOx emissions. The Applicant has committed to using natural gas in its LNG carriers and supply/crew vessels and tugs. SOB at 26. The LNG carriers would be using boil-off gas generated from Cabrillo Port storage tanks. CSLC at 4.6-15. Combustion of gas with higher heating value may result in higher NOx emissions from the LNG carriers. Sears 2006 at 19-20. EPA must ensure the emission estimates reflect the higher NOx emissions that could result from natural gas with higher heating values.

EPA and the Applicant also omit potentially significant sources of emissions from the Cabrillo Port emission inventory. They do not identify emissions from LNG carrier generator or auxiliary boiler emissions. Sears 2006 at 15. These are "typical components" of such carriers, and omitting such generator or auxiliary boiler emissions results in an underestimate of project emissions. Id. It also appears that additional marine vessels that may be associated with Cabrillo Port may not be accounted for in the inventory of vessels or vessel emissions. The CSLC's Revised DEIR discloses that some of the marine traffic mitigation measures – AM MT-3a and MM MT-3h – rely on vessels patrolling the "safety area" to monitor marine traffic. CSLC 2006 at 4.3-49 – 4.3-50. It seems unlikely that these safety vessels will be the same vessels as the two assist tugs and the crew boat currently identified in the emission inventory, as it otherwise appears from

the Revised DEIR that the assist tugs will be fully occupied assisting LNG carriers during docking, loading/unloading, and undocking, and therefore unable to effectively carry out this function as well as safety patrolling. Figure 2.2-3 shows both assist tugs actively assisting an LNG carrier during "offloading" at the FSRU. CSLC 2006. If additional vessels are needed to carry out safety patrolling activities, then these vessels and their emissions must be accounted for in the CAA permit.[25]

Finally, EPA and the Applicant have omitted from their marine vessel emission estimates all vessel emissions that occur further than 29 miles from shore. EPA's Statement of Basis identifies vessel emissions occurring in "district waters" and "federal waters," but it is not stated how far "federal waters" extend. For the CSLC's Revised DEIR, the Applicant only estimated emissions that would occur within 25 nautical miles of the coast of California (29 miles), and it appears the estimates in the proposed permit are consistent with this same distance (taking into account the Applicant's newly revised emissions estimates for the tugs). CSLC at 4.6-16; SOB at 10. This limited scope is inexplicable since, as discussed in detail above, numerous studies demonstrate that offshore emissions occurring at significant distances from the coastline will transport onshore and impact mainland air quality. Sears 2006 at 3-7. This is not a phenomenon that only occurs closer to shore. In particular, CARB has defined "California Coastal Waters" as the offshore area within which emissions "are likely to be transported ashore and affect the air quality in California's coastal air basins." Sears 2006 at 8; Scheible 2006 at Appendix B/Attachment, fn 1. "California Coastal Waters" comprise an area ranging coast-wide from 24 NM to 90 NM, or 27 to 102 miles. To define this area CARB considered:

> over 500,000 island, shipboard, and coastal meteorological observations. These data were taken from official records of a number of agencies including the U.S. Weather Bureau, Coast Guard, Navy, Air Force, Marine Corps, Civil Aeronautics Administration and Army Air Force.

CARB 1984 at 80. Excluding Cabrillo Port LNG carrier emissions that occur beyond 29 miles disregards the substantial evidence demonstrating that project emissions occurring at much greater distances from shore will transport onshore and impact onshore air quality.

Moreover, it is possible that LNG carriers will be fueled on diesel, not natural gas, when they are traveling outside the 29 mile mark. Klimczak 2006; See also, CSLC at 4.6-15 ("the applicant has proposed to use natural gas as the primary fuel in the main and

[25] BHPB recently submitted revised emissions estimates that purport to address increased crew boat usage for safety patrols. This information was posted on EPA's website on July 12, 2006. This last minute update to BHPB's application significantly interferes with the public's ability to review and comment on the proposed permit. As the electronic version of BHPB's data (which is necessary to independently verify BHPB's estimates) was not provided to EDC until July 19, 2006, EDC's air quality expert was unable to review and comment on this update.

auxiliary engines on the LNG carriers . . . *while these vessels are berthed at the FSRU or operating within 25 NM (29 miles or 46 km) of the coast of California*" (emphasis added)). Vessels operating primarily on diesel fuel will generate significantly higher NOx emissions. Sears 2006 at 17. Ms. Sears has calculated the increase in project emissions if vessel emissions estimates properly account for LNG carrier emissions beyond the 25 nautical mile mark. She has conservatively calculated emissions for vessels only within 75 miles of the California coast and concluded that total carrier NOx emissions with natural gas as the primary fuel would be 176.3 tons per year. Id. If primarily diesel fuel is used beyond 25 nautical miles, NOx emissions would increase to 499.7 tons per year. Id. at 18.

Conservatively assuming that LNG carriers will utilize natural gas, including all LNG carrier emissions within California Coastal Waters almost doubles the EPA's estimate of LNG carrier emissions. The use of diesel fuel increases the emissions estimate by a factor of 5. Id. at 16-18. Thus, EPA and the Applicant have dramatically underestimated the NOx emissions that would result from vessels associated with Cabrillo Port.

c. EPA Has Not Included Marine Vessel Emissions In The Cabrillo Port PTE

EPA has identified Cabrillo Port's PTE in Table 8 of the Statement of Basis:

Table 8
Annual Emission Limits

	Pollutant				
	NOx	**CO**	**ROC**	**SO_2**	**PM_{10}**
Limit (tpy)	66.05	171.73	28.66	0.42	12.13

SOB at 19.

This description of Cabrillo Port's PTE appears to be limited to emissions from the FSRU, and there are several problems with this. As discussed above, the FSRU emissions estimates rely on incorrect assumptions and are likely underestimated.[26] If EPA incorporates these faulty emission estimates into the permit (including the permit conditions which are intended to limit emissions to these levels), the permit would not reflect the actual maximum quantity of emissions from Cabrillo Port. Cabrillo Port would thus be permitted to operate with emissions levels which exceed its permitted PTE.

[26] There are also unexplained discrepancies between Table 8 and Table 4 ("Estimated Criteria Pollutant and Ammonia Emissions from Equipment Onboard the FSRU"). SOB at 9. Table 4 shows slightly higher emissions of NOx (66.07) and CO (171.75) than Table 8.

In addition, EPA has omitted marine vessel emissions– a significant category of emissions – from the Cabrillo Port PTE. This omission is inexplicable given the clear dictates of VC APCD's rules, the DPA, and EPA's own rules. It is also misleading because EPA discusses and identifies Cabrillo Port marine vessel emissions in the Statement of Basis, but otherwise fails to clarify that such emissions are not accounted for, limited or controlled by the proposed permit conditions. See, e.g., SOB at 6 and 10.

VC APCD rules state that:

> The emissions from all marine vessels which load or unload at the source shall be considered as emissions from the stationary source while such vessels are operating in District waters and in California Coastal waters adjacent to the District. The emissions from vessels shall include reactive organic compound vapors that are displaced into the atmosphere; fugitive emissions; combustion emissions in District waters; and emissions from the loading and unloading of cargo.

VC APCD Rule 2 and Rule 26.1.27 (definition of "stationary source").

Thus, based solely on VC APCD rules, all marine vessel emissions in "District waters" (e.g., SOB Table 6) must be included in the Cabrillo Port PTE. VC APCD defines "District Waters" to correspond with state waters – i.e., to include the Pacific Ocean within three miles of the mean high tide line. Villegas 2004 at 3. In addition, certain emissions that occur within "California Coastal Waters" (as defined by CARB) must also be included – reactive organic compound vapors that are displaced into the atmosphere, fugitive emissions, and emissions from the loading and unloading of cargo (e.g., SOB at 10, Table 7[27]). This requires the Cabrillo Port PTE to take account of any emissions resulting from the loading and unloading of LNG tankers or supply boats, including tug emissions that occur while such tugs assist with the loading and unloading of LNG carriers.

Even EPA's own PSD rules require that such marine vessel emissions be included in Cabrillo Port's PTE. EPA has interpreted its definition of "stationary source" to include "those dockside activities that would directly serve" the purposes of a marine terminal, and,

> [p]resumably . . . the activity of loading or unloading a ship would in every case directly serve the purposes of the terminal and would be under the control of its owner or operator to a substantial extent.

EPA 1980 at 33 (45 Fed. Reg. 52676 (Aug. 7, 1980)). In this regard, EPA's PSD rules would calculate the PTE for Cabrillo Port similar to VC APCD.

[27] This Table summarizes "Vessel Emissions in Federal Waters," but does not specify the nature of such emissions.

It is thus entirely unclear why EPA has failed to include, at least, vessel emissions in district waters as well as emissions associated with the loading or unloading of Cabrillo Port marine vessels. In June of 2004, VC APCD communicated its position regarding how marine vessel emissions should be accounted for in the Cabrillo Port PTE. Villegas 2004. The only category of emissions which VC APCD indicated need not be included in the PTE were "combustion emissions, which include propulsion and hoteling emissions, from supply boats or LNG tankers while in California coastal waters . . . but outside District waters." Id. at 4. VC APCD's position, however, does not consider the role of the DPA in this CAA permit decision. Under the DPA, such emissions must be accounted for in the Cabrillo Port PTE.

The DPA states that the law of the United States shall apply to a deepwater port – including the activities "connected" to or "associated" with the "use or operation of the port – "as if such port were an area of exclusive jurisdiction located within a State," and that the law of the nearest adjacent coastal state "is declared to be the law of the United States." 33 U.S.C. § 1518(a) and (b). As explained above, the "nearest adjacent coastal state" is defined to include the State "whose seaward boundaries, if extended beyond 3 miles, would encompass the site of the deepwater port." 33 U.S.C. § 1518(b). The DPA, thus, does not distinguish between state waters and federal waters for purposes of determining applicable State or U.S. laws. In fact, the very point of DPA Section 1518 is to clarify that such geographic and jurisdictional distinctions are not relevant under the DPA. If they were, state law would never apply to a port located outside of state waters. Under the DPA the laws that apply in the adjacent coastal state, including the state seaward 3 mile boundary, apply to a port and the activities connected to or associated with the use and operation of the port.

For this reason, the proper approach to determining the Cabrillo Port PTE under VC APCD rules *and* the DPA is to treat the FSRU and the associated marine vessels as if they are operating in State (i.e., VC APCD "District") waters. Under VC APCD rules, a stationary source includes "all marine vessel emissions" while in District waters. VC APCD Rule 2 and Rule 26.1.27; see also, Villegas 2004 at 3-4. Thus, all emissions (including propulsion emissions) from all marine vessels connected to or associated with Cabrillo Port must be accounted for in Cabrillo Port's PTE whether or not those vessel emissions occur outside District waters. This is also an appropriate approach since the marine vessel emissions comprise the bulk of Cabrillo Port emissions, and these emissions will transport to the mainland nonattainment areas and contribute to the onshore ozone nonattainment problem.[28]

[28] This approach is also consistent with EPA's rules for OCS sources which require that "emissions from vessels servicing or associated with an OCS source shall be considered direct emissions from such a source while at the source, and while in route to or from the source when within 25 miles of the source, and shall be included in the "potential to emit" for an OCS source. 40 C.F.R. § 55.2 (definition of "potential emissions")

EPA, therefore, has no basis to entirely omit marine vessel emissions from the Cabrillo Port PTE under any relevant law. At a minimum, EPA must identify and include all vessel emissions associated with the loading and unloading of the LNG carriers. However, because Cabrillo Port falls under the jurisdiction of the DPA, VC APCD rules apply and the proper interpretation of those rules requires that the Cabrillo Port PTE include all marine vessel emissions connected to or associated with the Port whether or not those emissions are generated in District (i.e., State) waters. As discussed above, Ms. Sears has estimated NOx emissions from LNG carriers up to 75 miles from the coastline. Depending on the fuel used, this would increase EPA's estimated LNG carrier NOx emissions from 176.3 tons to 499.7 tons per year. These NOx emissions must be included in the PTE, and EPA must conduct similar calculations to determine ROC, CO and other marine vessel emissions.[29]

In sum, EPA must correct the errors underlying its emissions estimates for the Cabrillo Port FSRU and marine vessels, and include all of these emissions in the Cabrillo Port PTE. Once EPA has properly calculated the Cabrillo Port PTE, then it can identify the appropriate amount of offsets required under Rule 26.2 and determine whether Cabrillo Port qualifies as a "major stationary source" for purposes of Rule 26.10. EPA must also ensure that the permit contains enforceable conditions to limit Cabrillo Port emissions to the calculated PTE.

IV. BHPB's "Air Quality Improvement Projects" Do Not Adequately Mitigate and Compensate For Cabrillo Port Emissions

In a transparent attempt to mislead the public about the full scope of air quality impacts from Cabrillo Port, EPA points to a series of so-called "air quality improvement projects" which BHPB has committed to implementing. SOB 29-30. However, these air quality improvement projects will not adequately mitigate and compensate for Cabrillo Port's significant air quality impacts.

a. Stationary Source Control Technologies "Consistent With BHPB's BACT Analysis"

EPA reiterates that BHPB has committed to using stationary source control technologies that are "consistent with its BACT analysis." SOB at 29. However, EPA and BHPB already rely on certain of these technologies to justify their estimated FSRU emissions (although, as discussed above, these proposed permit conditions are not adequate to ensure emissions will be thus limited), so it is deceptive to suggest that this

[29] EPA has also failed to take into account fugitive emissions as a source of emissions from the Cabrillo Port FSRU and marine vessels issue. VC APCD Rules and EPA's rules all require that fugitive emissions be included in a source's PTE. VC APCD Rule 2 and Rule 26.1; 40 C.F.R. § 52.21(b)(a)(iii). If there are no fugitive emissions associated with the FSRU or marine vessels, then this should be specified by EPA in its Statement of Basis.

project is "improving" air quality, when, at best, all it would do is reduce the significant increase in emissions that would not occur at all but for Cabrillo Port. In addition, as previously discussed, BHPB's BACT commitment, although consistent with its own analysis of BACT measures, is not BACT under VC APCD Rule 26.2.A and does not implement BACT for marine vessels.

b. Use Of Natural Gas In Marine Vessels

BHPB has committed to using natural gas to operate LNG carriers "while in US waters," and to operate the supply and crew vessels "in both federal and state waters." This "project" has apparently already been incorporated into EPA and the Applicant's marine vessel emission estimates. SOB at 10. As with the FSRU BACT commitment, it is thus deceptive to suggest that this project is "improving" air quality, when, at best, all it would do is reduce the significant increase in emissions that would not occur at all but for Cabrillo Port.

We do not dispute EPA's conclusion that the use of natural gas "has significant emissions benefits, especially compared to the traditional use of bunker fuel." SOB at 29. As discussed above, however, although BHPB says it will use natural gas in US waters and/or federal waters, its commitment actually may only extend so far as a subset of those waters. Beyond 29 miles offshore, it is unknown whether Cabrillo Port LNG carriers will utilize natural gas or diesel. If diesel is used beyond 25 miles offshore, LNG carriers would emit a total of at least 499.7 tons per year of NOx. NOx emissions would be much lower (176 tons per year) if natural gas is used beyond the 29 mile mark.

c. Lower Emitting Tug Engines

This "project" has apparently already been incorporated into EPA's and the Applicant's marine vessel emission estimates. SOB at 10. Thus, as with most of the other "air quality improvement projects" identified, it is deceptive to suggest that this project is "improving" air quality, when, at best, all it would do is reduce the significant increase in emissions that would not occur at all but for Cabrillo Port. In addition, as explained in detail above, BHPB has utilized an inappropriate NOx emission factor that does not reflect actual tug operating parameters. Sears 2006 at 18-19. As a result BHPB's estimate of tug emissions significantly underestimates the actual amount of emissions likely to result.

d. Retrofit Of Third Party Tug Engines

Of the projects described, this is the only one that even purports to "improve" existing air quality conditions. BHPB claims that the retrofit project "will decrease NOx emissions in California Coastal Waters by more than 210 tons per year," that "[m]ore than 125 tons per year of emission reductions will occur in the immediate area surrounding Cabrillo Port," and that because these tugs "emit closer to shore" than the FSRU, "the benefits will substantially exceed Cabrillo Port's impacts." Klimczak 2006a. However, BHPB's claims are inaccurate and overstated, and this proposed project is

inadequate to mitigate the significant air quality impacts to Ventura County and Los Angeles County.

Most significantly, BHPB's claimed reductions are based on NOx emissions that would occur over line haul routes that run between southern Los Angeles County, past Point Arguello, up the Central Coast, through the San Francisco Bay, and into the Suisun Bay – a distance of 486 miles. Sears 2006 at 22. It is remarkable that, although BHPB has otherwise strenuously asserted that Cabrillo Port marine vessel emissions beyond Ventura County "district waters" should not be considered part of its "stationary source" emissions, when BHPB wants to claim credit for emission reductions, it identifies emissions throughout "California Coastal Waters." However, if credit is to be claimed for all emissions that would occur within "California Coastal Waters," then these reductions must be compared to Cabrillo Port emissions that would occur within California Coastal Waters. BHPB cannot have it both ways – nor can EPA.

As discussed above, the identified PTE for Cabrillo Port only includes emissions generated in VC APCD "District waters." Thus, to fairly evaluate the mitigating effect of BHPB's claimed reductions, EPA must specifically consider the reductions that would occur within the VC APCD. BHPB's tug retrofit project is estimated to result in 21.31 tons per year of NOx reductions within the VC APCD. Sears 2006 at 23-24. This amount is insufficient to mitigate the 66.07 tons per year that EPA and BHPB estimate will be generated by Cabrillo Port within the VC APCD, much less the additional 96.7 tons per year of NOx that EPA and BHPB estimate will be generated within "federal waters."

BHPB's claim that "more than 125 tons per year of emission reductions will occur in the immediate area surrounding Cabrillo Port" also greatly overstates the benefits to VC APCD and encompasses an area significantly larger than the area within which BHPB and EPA calculate the Cabrillo Port PTE. BHPB's claim assumes that the "immediate area" surrounding Cabrillo Port includes:

> A distance spanning about 82 miles from the Port location to the L.A. destination, and about 174 miles from the Port location of the northern edge of Santa Barbara County (44 + 130 miles).

Sears 2006 at 24. As discussed above, Ms. Sears has calculated LNG carrier NOx emissions up to 75 miles off the coastline, an area well within either the 82 miles or 174 miles that BHPB considers to be in the "immediate" vicinity of Cabrillo Port. Id. at 24-25. Depending on the fuel used, this would increase the estimated LNG carrier NOx emissions from 176.3 tons to 499.7 tons per year which would result in a total NOx PTE of 242.37 to 565.77 tons per year for Cabrillo Port. Id. Thus, reductions of 125 tons per year within this area would, at best, only make up for just over half of the Cabrillo Port NOx emissions.

In addition, BHPB's assertion that the distance of an emissions source to the onshore areas has some bearing on the significance of onshore impacts is soundly rejected by the multiple studies and meteorological assessments demonstrating that

emissions generated within even 100 miles of the California coastline can blow onshore. Sears 2006 at 3-7. Studies have also demonstrated that moving a source farther offshore within that area does not necessarily benefit onshore air quality. Sears 2006 at 5 (discussing SC AQMD and CARB shipping lane study).

Furthermore, given BHPB's tendency to choose emissions assumptions that work in its favor but do not necessarily reflect actual operating parameters, estimates for the replacement tug engines and the existing engines should be carefully scrutinized and verified by EPA. Sears 2006 at 25. The contracts with the Sause Bros., Inc. (Klihyam) and Olympic Tug and Barge (Pacific Falcon) should also be scrutinized to ensure that their terms do not otherwise undercut the claimed mitigation. For example, the duration of the Sause Bros.' contract is seventeen years. Wood 2006, Attached "Vessel Conversion Agreement" at ¶ 5. However, BHPB's projected "life" of Cabrillo Port is up to 40 years, and it could be longer since the DPA license would have no expiration date. CSLC 2006 at 2-81. Thus, the claimed mitigation may not even be in place for the duration of Cabrillo Port's operation.

e. EPA Cannot Rely On BHPB's "Air Improvement Projects" To Justify the Proposed Permit

Given EPA's position that BACT compliance and offsets are not required for the Cabrillo Port permit, it appears that the only reason these air quality projects are discussed at all is to mislead the public into thinking that Cabrillo Port will not have significant air quality impacts. We have demonstrated throughout this comment letter that this characterization is completely inaccurate. In addition, whatever EPA's intent for these "air quality improvement projects," if they are not included as conditions of the permit, they are entirely unenforceable by EPA. BHPB's "air quality improvement projects" cannot be used as a substitute for compliance with the requirements of the DPA and the CAA, and EPA cannot use these BHPB promises as a basis to ignore the law.

V. Cabrillo Port Qualifies As A "Major Stationary Source" For Purposes of PSD Permit Requirements

For the reasons described above, EPA's decision to permit Cabrillo Port without requiring compliance with VC APCD Rule 26.2 violates the DPA, the CAA, and applicable State law. It also disregards the significant air quality impacts that will occur to the mainland nonattainment areas. The permit as proposed is also invalid because it does not comply with federal PSD requirements.

The VC APCD rules incorporate by reference the federal PSD requirements. VC APCD Rule 26.10. Under the federal PSD program, a "major stationary source" must, among other things, apply BACT[30] and conduct an air quality analysis to demonstrate

[30] "BACT" for purposes of PSD is distinct from (and less stringent than) "BACT" under VC APCD Rule 26.2. PSD "BACT" is defined at 42 U.S.C. § 7479(3) and 40 C.F.R. § 52.21(b)(12) as "an emission limitation based on the maximum degree of reduction of

that emissions will not cause or contribute to a violation of any applicable federal air quality standard or PSD increment. 42 U.S.C. § 7475(a); 40 C.F.R. § 52.21. A "major stationary source" is any stationary source of air pollutants with the potential to emit 250 tons per year or more of any air pollutant. 42 U.S.C. § 7479(1); 40 C.F.R. § 52.21(b)(1). In addition, certain specified categories of stationary sources, including "fuel conversion plants," are considered to be a "major emitting facility" if they have the potential to emit 100 tons per year or more of any air pollutant. Id.

EPA has incorrectly determined that Cabrillo Port would not be a "major stationary source." SOB at 19.

a. Cabrillo Port Does Qualify As A Fuel Conversion Plant

EPA asserts that Cabrillo Port does not qualify as a fuel conversion plant. EPA relies on a 2003 EPA memorandum that generally concludes that the PSD rules are not intended to include the "vaporization of LNG to natural gas" in the fuel conversion plant category. The memo does not specifically consider Cabrillo Port, or any other particular LNG facility. Shelton 2003 at 1-2.

EPA's reliance on the 2003 memo in the context of permitting Cabrillo Port is misplaced. The basis for this memo's conclusion is that "vaporization of LNG occurs without the need for chemical or process change" and that "vaporization would occur naturally at ambient conditions." Id. This is clearly not the situation with Cabrillo Port.

The purpose of Cabrillo Port's FSRU is to "receive and store LNG from tankers; *generate power to heat and regasify gas*; inject odorant into natural gas stream; send natural gas to shore via pipelines." CSLC 2006 at 2-6 (emphasis added). While the storage tanks on the FSRU are designed to maintain LNG in its "cold liquid form," the regasification function of the FSRU is comprised of a "controlled heating process consisting of a closed system with combustion vaporizers submerged in fresh water" to heat the LNG to its gaseous form. CSLC 2006 at 1-1 and 2-23. Specifically:

> The submerged combustion vaporizers would heat the LNG in a water bath, resulting in regasification of the LNG into natural gas at a temperature of 41°F (5°C). The LNG and natural gas flow would be contained within process piping submerged in a water bath maintained at 86°F (30°C). The water bath would provide stable heat transfer from the LNG to the natural gas, i.e., it would provide a heat source to convert the natural gas from a liquid to a gas.

CSLC at 2-24.

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each pollutant subject to regulation under this chapter emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility . . . ."

Thus, at Cabrillo Port, vaporization of the LNG will not occur "without the need for chemical or process change." Nor will it occur at "naturally at ambient conditions." The regasification of Cabrillo Port LNG will only occur through a controlled heating process – a process that relies on generated power. Indeed, most of the emissions units (and emissions) EPA identifies for the proposed permit are associated with the generation of power to heat the LNG to its gaseous form. See, Proposed Permit at 2 ("Equipment List") and SOB at 5. Cabrillo Port is not designed to regasify LNG at ambient conditions, and, therefore, the conclusions in the 2003 memo are inapplicable here.

In addition, although the guidance provided in the 2003 EPA memo is inapplicable to Cabrillo Port, another EPA memo does provide relevant guidance on this issue. In 1992, EPA opined that "[f]uel conversion plants obviously include those plants which accomplish a change in state (e.g., solid to liquid to gas) for a fuel . . . and that "applicability for this source category is determined by whether a facility changes the state (e.g., solid to gas) or form (e.g., process sawdust into a pellet) of a fuel." Lillis 1992 at 3. The primary purpose of Cabrillo Port is to change the state of imported LNG from liquid to gas, and the emissions units that EPA is proposing to permit are included in the facility design precisely to accomplish this change in state.

For these reasons, Cabrillo Port does qualify as a "fuel conversion plant," and must be permitted as a "major stationary source," if its PTE equals or exceeds 100 tons per year.[31] As discussed above, EPA has understated the Cabrillo Port PTE. When marine vessel emissions are properly accounted for, Cabrillo Port emissions would exceed 100 tons per year. In addition, as discussed above, there are significant errors and omissions in EPA and BHPB's estimates of Cabrillo Port emissions that, when corrected for, could increase even just the FSRU emissions to equal to or greater than 100 tons per year.

b. Cabrillo Port Must Comply With PSD Requirements

As explained above, Cabrillo Port must comply with both Rule 26.2 and Rule 26.10. Thus even if EPA modifies its permit to incorporate Rule 26.2 requirements, it must still also modify the permit to comply with federal PSD requirements as required by Rule 26.10. In addition, if EPA continues to disregard the Rule 26.2 requirements, the permit is still invalid because it fails to comply with federal PSD requirements. These requirements include: the application of BACT (40 C.F.R. § 52.21(j)); performance of an air quality analysis to demonstrate that pollutant emissions would not violate any National Ambient Air Quality Standard of the applicable PSD increment (40 C.F.R. § 52.21(k)); and an analysis of the impairment to visibility, soils and vegetation that would occur as a result of the new source (40 C.F.R. § 52.21(o)). None of these requirements are incorporated into the proposed permit, and it is thus impossible for the public to

[31] The Santa Barbara County Air Pollution Control District has also evaluated the Cabrillo Port facility and concluded that it is a "fuel conversion plant." Cantle 2006.

comment on these requirements with respect to Cabrillo Port. EPA must therefore issue a newly proposed permit that incorporates federal PSD requirements.

VI. EPA Has Improperly Concluded That BHPB Need Not Comply With CAA 112(r) Chemical Accident Prevention Requirements

EPA relies on a March 6, 2006 memo from EPA's Office of General Counsel ("OGC") to conclude that BHPB need not comply with the chemical accident prevention requirements of CAA Section 112(r). SOB at 21. This OGC memo does not specifically evaluate Cabrillo Port or any other LNG facility, and EPA Region 9 itself conducts no specific analysis of Cabrillo Port to determine whether it even falls within the parameters identified by the memo. Id.

The OGC memo simply concludes that "*[t]o the extent* LNG facilities transport, or store incident to transport, regulated substances or extremely hazardous substances, they are exempt from CAA section 112(r)." Klee 2006 at 8 (emphasis added). However, neither the OGC memo nor EPA Region 9 define "transport" or "storage incident to transport," or explain how Cabrillo Port's handling of natural gas falls within either of these categories. As discussed above, the purpose of Cabrillo Port's FSRU is to "receive and store LNG from tankers; generate power to heat and regasify gas; inject odorant into natural gas stream; send natural gas to shore via pipelines." CSLC 2006 at 2-6. Activities at Cabrillo Port thus encompass more than the transportation and storage of natural gas. In addition, EPA has not considered whether other regulated substances triggering compliance with CAA Section 112(r) would be present at Cabrillo Port.

Thus, EPA has improperly concluded that Cabrillo Port need not comply with CAA Section 112(r) chemical accident prevention requirements.

VII. Other Problems With Proposed Permit Conditions

Ms. Lewis has identified multiple permit conditions that rely on vague, undefined, or ambiguous terms, or otherwise raise enforceability concerns. Lewis 2006 at 7-9. These problems are in addition to the concerns discussed above regarding the sufficiency of permit conditions to enforce BHPB's emission control technology commitments. These additional problems increase the likelihood that EPA's proposed permit will be inadequate to limit the Cabrillo Port PTE, and must be corrected. Id.

In addition, EPA's proposed permit condition XII ("Expiration of ATC and Obligation to Apply for Operating Permits") extends the life of the proposed ATC permit in a manner that is inconsistent with VC APCD rules and with the DPA. The language proposed is appropriately based on VC APCD Rule 10, but has been modified by EPA to accommodate a potentially longer construction time for the FSRU than VC APCD Rule 10 allows. SOB at 14. EPA claims that the standard 2 to 4 years allowable under Rule 10 to construct the FSRU is insufficient because Cabrillo Port is not expected to commence operation until 2011. Id.

While it is not necessarily unreasonable to accommodate this construction schedule, the proposed permit appears to define "construction" in broader terms than just construction of the FSRU:

> Once *construction* has commenced, this permit shall expire and be cancelled if *construction* stops for more than eighteen months unless the owner or operator has obtained a written extension from EPA.

Proposed Permit at 20. Construction of the Cabrillo Port Project includes: "installation of the mooring and tie-in of the FSRU, installation of offshore pipelines, drilling of a shoreline pipeline crossing and pipeline installation at Ormond Beach in Ventura County, and installation of onshore pipelines. SOB at 5. Since the CAA permit itself does not "permit" pipeline related activities, the definition of construction in the permit should be limited to construction of the FSRU. Thus, EPA should clarify that construction is defined as "construction of the FSRU" and does not include construction of the pipeline or any other component of the project not encompassed by the permit.

Furthermore, as discussed above, Cabrillo Port must be permitted in accordance with VC APCD Rule 26.2 BACT requirements. VC APCD Rule 10 limits permit expiration extensions if current BACT is more stringent at the time of the requested extension than when the permit was issued. VC APCD Rule 10.A.4. This limitation should be incorporated into the EPA permit as-is, and it should not be modified as proposed.

VIII. Other Agencies Have Identified Significant Air Quality Impacts Or Deferred To EPA's Position

EPA misinforms and misleads the public when it asserts that none of the other agencies evaluating air quality impacts from Cabrillo Port have:

> identified significant issues related to air quality (except emissions increases related to onshore construction activities). Nor have the consultations resulted in any conclusion by the Coast Guard/MARAD that the project would result in unacceptable environmental impacts.

SOB at 30.

It is true that the October 2004 Draft Environmental Impact Statement/Environmental Impact Report for the Cabrillo Port Liquefied Natural Gas Deepwater Port" (jointly released by the Coast Guard, the CSLC, and the U.S. Maritime Administration) did not conclude that Cabrillo Port would result in unacceptable environmental impacts. However, this conclusion was premised on the understanding that "the Applicant must obtain emission offsets for the O_3 precursors, NOx and reactive organic compounds." U.S. Coast Guard 2004 at 4.6-8, 4.6-15. Thus, this document did not even consider the possibility that Cabrillo Port emissions would not be adequately

regulated pursuant to the EPA's CAA permit. To date, these Agencies have not released a final Environmental Impact Statement/Environmental Impact Report.

In March 2006, the Coast Guard issued a Draft General Conformity Determination which, as EPA points out, concluded that Cabrillo Port construction emissions would not conform with SIP requirements for Los Angeles County. U.S. Coast Guard at 8. However, as with the October 2004 EIS/EIR, the Coast Guard simply did not evaluate the potential air quality impacts from the operation of Cabrillo Port because of EPA's new position that Cabrillo Port would be permitted as if it were located in a federal attainment area and, according to the Coast Guard, actions in attainment areas do not require General Conformity determinations. Id. at 3-4. EDC, on behalf of CCPN, submitted comments disputing this position and demonstrating that the Coast Guard had improperly ignored the substantial air quality impacts from offshore construction activities and operation of Cabrillo Port. Kraus 2006. To date, the Coast Guard has not released a revised or final General Conformity Determination for Cabrillo Port.

Moreover, the CSLC Revised DEIR mentioned by EPA flatly contradicts EPA's assertions here. In the Revised DEIR, the CSLC did acknowledge that Cabrillo Port would have significant air quality impacts, including impacts to mainland nonattainment areas. See, e.g., CSLC 2006 at 4.6-39 – 4.6-41. EDC, on behalf of CCPN, also submitted comments demonstrating that CSLC also failed to consider significant categories of air emissions. Krop et al 2006. To date, the CSLC has not released a revised or final EIR.

Finally, EPA disregards the fact that a number of state and local agencies have raised concerns about Cabrillo Port's impacts to mainland areas. CARB has concluded that Cabrillo Port will impact mainland nonattainment areas. Scheible 2006. In addition, the VC APCD, the SC AQMD, and the SBC APCD have all acknowledged that Cabrillo Port emissions would impact mainland areas that are in nonattainment for ozone. Villegas 2006; Whynot 2005; Cantle 2006.

In any case, it is EPA that is responsible for this permit decision. As has been demonstrated throughout this letter, Cabrillo Port will in fact have significant air quality impacts in Ventura County and Los Angeles County, and it is up to EPA to comply with the DPA and the CAA and ensure that this facility is permitted in a manner that will protect these areas' air quality.

IX. EPA Has Failed To Provide Information Supporting Its Proposed Permit In A Timely Manner

EPA released the proposed permit for public review and comment on May 4, 2006 and posted supporting materials on a website dedicated to EPA's CAA permit decision on that same date. EPA 2006a. We appreciate EPA's efforts to make the proposed permit and supporting information easily accessible to the public on its website. However, the ongoing release of information throughout the comment period has otherwise undermined the public's ability to independently review and evaluate this permit decision.

Since the initial release of the proposed permit, BHPB has made several updates and adjustments to its permit application. For example, on June 1, 2006 significant new information was posted regarding BHPB's claimed emission reductions for their tug repowering projects. Id. The electronic version of the data supporting these claims, which is necessary to independently verify BHPB's assertions, was not released at that time, and although EDC requested this information, it was not provided to EDC until July 10. Lapka 2006.

EPA's extension of the public comment period to August 3, 2006 (provided because of inadequate notice to Spanish speaking members of the affected community) did not cure this problem, as the release of significant new information continued well into the extended comment period. On July 12, 2006, EPA posted BHPB's "Revised modeling report" and updated emissions estimates for the FSRU, District waters and Federal waters. EPA 2006a. Once again, the electronic version of the data supporting these claims was not initially released, and was not provided to EDC until July 19 – too late for EDC's experts to independently verify the new estimates. Lapka 2006a.

In addition, in support of its NPDES Permit, BHPB has made modifications to the cooling system design that purportedly reduce air emissions by 4%. Worley Parsons 2006 at 4. This information was not even posted on EPA's CAA permit website, and was only made known to EDC by virtue of our review of the proposed NPDES permit. BHPB's report for its cooling system design does not include any detailed explanation or support for its statement that air emissions will be reduced. As a result, it is unknown how these adjustments impact BHPB's permit application or EPA's permit decision.

Cabrillo Port's air pollutant emissions and air quality impacts are the most fundamental factors regarding this permit decision, and EPA and BHPB have significantly interfered with the public's ability to review and evaluate these issues by moving forward with a proposed permit while these issues remain in flux and before the Applicant has completed its permit application.

X. EPA's Permit Decision Is Reviewable By The Environmental Appeals Board

Parties must generally petition the EPA Environmental Appeals Board ("EAB") to review an EPA permit decision before they may seek judicial review of that permit decision. 40 C.F.R. § 124.19. The EAB is an impartial body that is "independent of all Agency components outside the immediate Office of the Administrator." EAB Practice Manual at 1. EAB review of EPA decisions is intended to inspire confidence in the fairness of these decisions. Id. Apparently, EPA Region 9 intends to circumvent this important Agency review mechanism. SOB at 32 (stating that final permit would be reviewable only by the Ninth Circuit under Section 307(b)(1) of the CAA).

The EAB has specifically been delegated authority to review PSD and Title V permits. 40 C.F.R. § 124.19; 40 C.F.R. § 71.11(l). In addition, the EAB "shall at the Administrator's request, provide advice and consultation, make findings of fact and

conclusions of law, prepare a recommended decision, or serve as the final decisionmaker, as the Administrator deems appropriate." 40 C.F.R. § 1.25. At a minimum, EPA's permit decision here is subject to EAB jurisdiction as a PSD permit.[32]

More significantly, given the unique, highly controversial, and unprecedented circumstances surrounding this permit, EPA Region 9's permit decision warrants review by the EAB pursuant to a special assignment from the Administrator. Region 9 has made this request to the EAB before when it issued a preconstruction "nonattainment area" permit that would have authorized construction of a solid waste land fill proposed on the Campo Band Indian Reservation. In Re Campo Landfill Project, Campo Band Indian Reservation, 6 E.A.D. 505 (EAB 1996). Normally, a "nonattainment area" permit is issued by a state, and thus not subject to EAB review. Id. at fn 4. EPA, however, was required to issue the Campo permit because the state does not have jurisdiction to issue permits on tribal lands and the Campo Band had not been approved to assume responsibility for such permitting. Id. As a result, Region 9 determined that the nonattainment area permit "was an appropriate subject for delegation" to the EAB. Id.

Similarly here, EPA is acting as the sole CAA permitting Agency for Cabrillo Port, because the DPA dictates that EPA, not VC APCD, issue any required CAA permits. It is therefore appropriate for the EAB to review this significant EPA decision. Moreover, the controversy surrounding this permit, enhanced by EPA's departure from its consistently held position that Cabrillo Port should be permitted in accordance with VC APCD's nonattainment area requirements, warrants EAB participation in the Agency's decision here. The circumstances surrounding EPA's proposed permit, including political pressure from the White House and EPA political appointees, have completely undermined the public's confidence in EPA Region 9's decision making. To ensure the impartiality of EPA's Cabrillo Port permit decision, Region 9 must seek and facilitate a special delegation of authority to the EAB as permitted under 40 C.F.R. § 1.25, and it must advise parties to petition the EAB for review of the Cabrillo Port permit decision. If Region 9 ignores this request, it will only confirm that the political momentum behind this project has overcome EPA's mandate under the CAA to protect the community's air quality and health.

XI. **Conclusion**

EPA cannot finalize this Cabrillo Port permit as proposed because it violates the Deepwater Port Act, the Clean Air Act, and applicable State law. As stated herein, the Cabrillo Port project must be permitted in accordance with Ventura County Air Pollution Control District Rules, including Rule 26.2, which requires current best available control technology and offsetting emission reductions. In addition, Cabrillo Port must be permitted in accordance with Ventura County Air Pollution Control District Rule 26.10. Finally, EPA must base its permit decision on a complete and accurate assessment of the project's "potential to emit." In this case, the proposed permit excludes and

[32] See discussion above regarding EPA's obligation to issue a PSD permit to address pollutants for which Ventura County is in attainment of federal air quality standards.

underestimates several critical project emissions. Accordingly, EPA must issue and circulate for public review and comment a new proposed permit that incorporates these necessary modifications.

Thank you for the opportunity to comment on this proposed permit.

Sincerely,

/s/
Karen M. Kraus
Staff Attorney

Attachments

cc: U.S. Coast Guard
MARAD
U.S. Senator Barbara Boxer
U.S. Senator Dianne Feinstein
U.S. Representative Lois Capps
Governor Schwarzenegger
California State Lands Commission
California Coastal Commission
California Air Resources Board
State Assemblymember Fran Pavley
State Assemblymember Pedro Nava
Ventura County APCD
Santa Barbara County APCD
South Coast AQMD
City of Malibu
City of Oxnard

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